

**CITY OF SALEM
CONTRIBUTORY RETIREMENT SYSTEM**

Actuarial Valuation Report

January 1, 2001

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Report Summary:

Highlights

January 1, 1999

January 1, 2001

Contributions

Funding Schedule FY 2002	\$4,615,975	\$4,610,788
Funding Schedule FY 2003	4,745,000	4,783,763

Funded Ratios

GAS No. 25	61.6%	62.8%
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Participants

Actives	804	854
Inactives	96	94
Retirees and Beneficiaries	548	532
Disabilities	<u>75</u>	<u>74</u>
Total	1,523	1,554

Payroll

Payroll of Active Members	\$25,411,629	\$29,072,197
Average Payroll	31,607	34,042

Normal Cost

Employer	1,460,721	1,317,900
Employee	1,913,702	2,360,631
Administrative Expenses	<u>175,000</u>	<u>250,000</u>
Total	3,549,423	3,928,531

Actuarial Accrued Liabilities

Actives	54,242,743	58,918,856
Retirees, Beneficiaries, Disabilities and Inactives	<u>57,052,210</u>	<u>58,415,871</u>
Total	111,294,953	117,334,727

Actuarial Value of Assets

68,563,143 73,727,923

Unfunded Actuarial Accrued Liabilities \$42,731,810 \$43,606,804

Introduction

This report presents the City of Salem actuarial valuation findings as of January 1, 2001, under the Commonwealth of Massachusetts Retirement System.

The actuarial valuation is based on:

- Provisions of the General Laws of the Commonwealth of Massachusetts (principally Chapter 32) as of January 1, 2001, and Chapter 399 of the 1992 General Laws
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employees' Retirement Administration Commission by the City of Salem Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation also includes the contributions required under the provisions of Chapter 697 as interpreted by the Public Employees' Retirement Administration Commission (PERAC).

The valuation and appropriation forecast are prepared in accordance with Chapter 32 as of January 1, 2001. They account for:

- The passage of Chapter 306 regarding handling of administrative expenses
- The increased employee contribution rate of 9.0% of earnings effective for all future employees hired after July 1, 1996
- Annual cost-of-living adjustments (COLA) of 3.00%.

The valuation and forecast do not account for:

- Any other subsequent changes in the law
- Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the past two years since the last actuarial valuation, the total required appropriation has increased as a dollar amount but has decreased from 16.8% of total payroll for FY00 to 15.9% of total payroll for FY02. The changes are a result of favorable actuarial experience during the preceding two years, including lower than expected salary increases offset by lower than expected asset performance.

Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	<u>January 1, 1999</u>	<u>January 1, 2001</u>
Superannuation	\$2,611,931	\$2,938,423
Death	317,681	247,686
Disability	323,674	356,604
Terminations	121,137	135,818
Administrative Expenses	<u>175,000</u>	<u>250,000</u>
Total Normal Cost	3,549,423	3,928,531
% of Pay	14.0%	13.5%
Employee Contributions	1,913,702	2,360,631
% of Pay	7.5%	8.1%
Employer Normal Cost	\$1,635,721	\$1,567,900
% of Pay	6.4%	5.4%

Present Value of Actuarial Accrued Liabilities

The present value of actuarial accrued liabilities (AAL) represents today's value of all benefits earned by the actives and inactive. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	<u>January 1, 1999</u>	<u>January 1, 2001</u>
Actives		
Superannuations	\$48,172,080	\$52,749,460
Death	3,198,067	2,873,185
Disability	3,076,358	3,513,167
Terminations	(203,762)	(216,956)
Inactives		
Retirees	46,306,622	47,595,410
Disabled Retirees	10,441,458	10,162,095
Inactives	<u>304,130</u>	<u>658,366</u>
Total	\$111,294,953	\$117,334,727
- -		

Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactives as well as all benefits earned and expected to be earned in the coming years by the actives. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	<u>January 1, 1999</u>	<u>January 1, 2001</u>
Actives		
Superannuation	\$74,980,409	\$83,957,363
Death	6,525,284	5,559,420
Disability	6,876,777	7,661,985
Terminations	1,225,232	1,410,391
Inactives		
Retirees	46,306,622	47,595,410
Disabled Retirees	10,441,458	10,162,095
Inactives	<u>304,130</u>	<u>658,366</u>
Total	\$146,659,912	\$157,005,030
- -		

Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	<u>January 1, 1999</u>	<u>January 1, 2001</u>
Cash equivalents	\$2,344,830	\$2,206,238
Short term investments	6,591,246	1,687,516
Fixed income securities	28,898,485	24,475,739
Equities	11,744,728	17,085,352
Other	14,276,600	21,109,363
International	4,050,135	6,665,798
Accounts receivable	184,105	87,774
Accounts payable	0	0
Accrued income	<u>473,014</u>	<u>410,144</u>
Total Market Value	\$68,563,143	\$73,727,923
Total Actuarial Value	\$68,563,143	\$73,727,923

Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL and the UAAL will be eliminated. Thereafter annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table V.

Table V

	<u>January 1, 1999</u>	<u>January 1, 2001</u>
Actuarial Accrued Liability	\$111,294,953	\$117,334,727
Actuarial Assets	<u>68,563,143</u>	<u>73,727,923</u>
Unfunded Actuarial Accrued Liability	\$42,731,810	\$43,606,804
Funded Status	61.6%	62.8%

Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2028, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the prior unfunded actuarial accrued liability by June 30, 2024
\$ 42,953,546 over 23 years with 4.5 % increasing payments
- Level amortization of the Early Retirement Incentive unfunded liability by June 30, 2008
\$ 653,258 over 7 years
- Interest adjustment for payments deposited at the beginning of the fiscal year.

The pension appropriation is shown in Table VI.

Table VI

	<u>January 1, 1999</u>	<u>January 1, 2001</u>
Normal cost	\$1,635,721	\$1,567,900
Amortization payment of the prior accrued liability	1,758,870	2,737,291
Amortization payment of COLA liability	574,675	0
Amortization payment of ERI	117,628	117,628
Amortization payment of current (gains)/losses	<u>(2,814)</u>	<u>0</u>
Total cost	4,084,080	\$4,422,819
% of Pay	16.1%	15.2%
Fiscal 2002 cost	\$4,615,975	\$4,610,788
Fiscal 2003 cost	\$4,745,000	\$4,783,763

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.5% per year. The employee contribution rate is expected to increase to 10.5% by 2028 with replacement of members contributing 5%, 7%, and 8% with those contributing 9%. Payments are assumed to be spread over the fiscal year.

The employer total cost is expected to gradually increase during the next 23 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost increase represents on average about 15.9% of payroll and will decrease to 13.3% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 3.4% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

Appropriation Forecast (amounts in thousands)

<u>Fiscal Year Ending</u>	<u>Payroll*</u>	<u>Employee Contribution</u>	<u>Employer Normal Cost with Interest</u>	<u>Amortization Payments with Interest</u>	<u>Employer Total Cost with Interest</u>	<u>Employer Total Cost % of Payroll</u>	<u>Funded Ratio %**</u>
2002	\$29,072	\$2,361	\$1,635	\$2,976	\$4,611	15.9	62.8
2003	30,380	2,495	1,679	3,105	4,784	15.7	64.2
2004	31,748	2,636	1,724	3,239	4,963	15.6	65.6
2005	33,176	2,785	1,770	3,379	5,149	15.5	67.0
2006	34,669	2,942	1,817	3,526	5,342	15.4	68.5
2007	36,229	3,108	1,864	3,679	5,543	15.3	70.0
2008	37,860	3,282	1,912	3,839	5,751	15.2	71.5
2009	39,563	3,466	1,960	3,883	5,843	14.8	73.1
2010	41,344	3,660	2,009	4,058	6,067	14.7	74.6
2011	43,204	3,864	2,058	4,241	6,299	14.6	76.2
2012	45,148	4,079	2,108	4,432	6,539	14.5	77.7
2013	47,180	4,306	2,157	4,631	6,788	14.4	79.3
2014	49,303	4,545	2,207	4,839	7,047	14.3	80.9
2015	51,522	4,797	2,258	5,057	7,315	14.2	82.5
2016	53,840	5,062	2,308	5,285	7,592	14.1	84.1
2017	56,263	5,341	2,358	5,523	7,880	14.0	85.7
2018	58,795	5,635	2,408	5,771	8,179	13.9	87.4
2019	61,441	5,945	2,458	6,031	8,488	13.8	89.1
2020	64,205	6,271	2,507	6,302	8,809	13.7	90.8
2021	67,095	6,615	2,556	6,586	9,141	13.6	92.6
2022	70,114	6,977	2,604	6,882	9,486	13.5	94.4
2023	73,269	7,358	2,651	7,192	9,843	13.4	96.2
2024	76,566	7,759	2,697	7,515	10,213	13.3	98.1
2025	80,012	8,181	2,742	0	2,742	3.4	100.0
2026	83,612	8,626	2,786	0	2,786	3.3	100.0
2027	87,375	9,094	2,828	0	2,828	3.2	100.0
2028	91,306	9,587	2,868	0	2,868	3.1	100.0
2029	95,415	10,019	2,997	0	2,997	3.1	100.0
2030	99,709	10,469	3,132	0	3,132	3.1	100.0
2031	104,196	10,941	3,273	0	3,273	3.1	100.0
2032	108,885	11,433	3,420	0	3,420	3.1	100.0
2033	113,784	11,947	3,574	0	3,574	3.1	100.0

* Calendar basis

** As of beginning of the Fiscal Year

GAS No. 25 and GAS No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GAS Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to \$0. The required disclosure information is shown in Table VII.

Table VII

	<u>January 1, 1999</u>	<u>January 1, 2001</u>
(1) Actuarial Accrued Liability	\$111,294,953	\$117,334,727
(2) Actuarial Value of Assets	<u>68,563,143</u>	<u>73,727,923</u>
(3) Unfunded Actuarial Accrued Liability	42,731,810	43,606,804
(4) Funded Ratio (2)/(1)	61.6%	62.8%
(5) Covered Payroll	\$25,411,629	\$29,072,197
(6) UAAL as a percentage of payroll: (3)/(5)	168.2%	150.0%
(7) Annual Required Contribution (ARC)	\$4,257,653	\$4,610,788
(8) Net Pension Obligation	\$0	\$0

PERAC Annual Statement
APPENDIX PAGE 3
ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by PricewaterhouseCoopers LLP as of January 1, 2000.

The normal cost for employees on that date was:	\$2,360,631	8.1% of pay
The normal cost for the employer was:	1,317,900	4.5% of pay
The actuarial liability for active members was:		\$58,918,856
The actuarial liability for retired members was:		58,415,871
Total actuarial accrued liability:		117,334,727
System assets as of that date:		73,727,923
Unfunded actuarial accrued liability:		\$43,606,804

The ratio of system's assets to total actuarial liability was 62.8%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	8.5%
Rate of Salary Increase:	5.5%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a percent of Covered Payroll (b-a)/c
01/01/01	\$73,727,923	\$117,334,727	\$43,606,804	62.8%	\$29,072,197	150.0%
01/01/99	68,563,143	111,294,953	42,731,810	61.6%	25,411,629	168.2%
01/01/97	51,236,360	82,440,774	31,204,414	62.1%	22,930,939	136.1%
01/01/94	41,074,617	71,831,709	30,757,092	57.2%	17,753,129	173.2%

Attach Copy of Current Approved Funding Schedule

EXHIBITS

Age/Service Distribution with Salary as of January 1, 2001

Attained Age	Average	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
20-24	8	-	-	-	-	-	-	-	-	-	8
	16,121	-	-	-	-	-	-	-	-	-	16,121
25-29	28	2	-	-	-	-	-	-	-	-	30
	20,655	45,930	-	-	-	-	-	-	-	-	22,340
30-34	35	15	7	-	-	-	-	-	-	-	57
	29,303	38,124	42,990	-	-	-	-	-	-	-	33,305
35-39	43	21	40	8	-	-	-	-	-	-	112
	24,461	37,712	45,594	41,653	-	-	-	-	-	-	35,721
40-44	65	25	38	17	3	1	-	-	-	-	149
	20,292	30,312	45,968	50,708	46,922	37,715	-	-	-	-	32,645
45-49	71	32	22	11	18	3	-	-	-	-	157
	24,029	27,542	36,206	45,147	52,866	45,727	-	-	-	-	31,652
50-54	42	27	23	5	13	26	2	-	-	-	138
	25,149	27,426	26,170	36,731	51,283	57,059	17,589	-	-	-	34,549
55-59	26	12	23	10	7	13	12	1	1	1	105
	25,900	26,615	24,913	30,925	46,635	44,594	54,293	36,600	59,222	33,605	
60-64	21	10	12	3	8	3	4	1	2	64	
	20,477	21,386	34,282	35,609	33,614	58,949	42,822	49,757	41,044	29,859	
65-69	3	6	5	2	-	5	-	-	1	22	
	20,574	21,750	22,434	18,737	-	31,651	-	-	32,456	24,208	
70+	1	1	2	2	1	2	2	1	-	12	
	7,404	14,653	28,503	25,933	35,441	26,462	32,470	750	-	23,749	
Total Employees	343	151	172	58	50	53	20	3	4	854	
Average Salary	21,473	27,777	34,014	35,719	41,268	38,612	13,570	16,836	28,636	28,136	

Retiree Distribution as of January 1, 2001

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	0	0	0	0	0	0
45-49	0	0	0	0	0	0
50-54	1	1	2	5,491	522	6,012
55-59	4	3	7	77,374	20,077	97,451
60-64	14	9	23	348,650	82,130	430,779
65-69	64	48	112	1,255,824	522,742	1,778,567
70-74	67	51	118	1,142,035	366,728	1,508,763
75-79	73	41	114	901,680	328,372	1,230,053
80-84	39	36	75	435,878	296,179	732,057
85-89	31	15	46	250,392	103,061	353,454
90-94	15	7	22	113,245	47,562	160,807
95-99	5	2	7	32,255	6,658	38,913
Total	313	213	526	4,562,823	1,774,032	6,336,855
Average	76.1	75.1	75.7	14,578	8,329	12,047
Frequency Percent	59.5	40.5	100	72	28	100

Disabled Retiree Distribution as of January 1, 2001

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	0	0	0	0	0	0
45-49	2	0	2	44,291	0	44,291
50-54	10	0	10	234,750	0	234,750
55-59	7	0	7	161,776	0	161,776
60-64	9	0	9	240,208	0	240,208
65-69	10	1	11	236,583	13,820	250,403
70-74	11	0	11	192,199	0	192,199
75-79	13	1	14	183,754	6,216	189,970
80-84	4	2	6	67,570	20,476	88,047
85-89	3	0	3	50,890	0	50,890
90-94	1	0	1	15,439	0	15,439
95-99	0	0	0	0	0	0
Total	70	4	74	1,427,460	40,513	1,467,973
Average (Age/Payment)	67.8	77	68.3	20,392	10,128	19,837
Frequency Percent	94.6	5.4	100	97.2	2.8	100

EXHIBIT 4 - DISTRIBUTION FORECAST:

Based on a closed group, the following is a 30 year forecast of benefit payments net of state reimbursable COLA payments.

<u>Fiscal Year Ending</u>	<u>Estimated Benefit Payments *</u>
2002	7,534
2003	7,845
2004	8,129
2005	8,399
2006	8,677
2007	9,010
2008	9,455
2009	9,961
2010	10,510
2011	11,053
2012	11,557
2013	12,162
2014	12,819
2015	13,525
2016	14,269
2017	15,055
2018	15,880
2019	16,649
2020	17,577
2021	18,860
2022	19,991
2023	20,834
2024	21,714
2025	22,629
2026	23,501
2027	24,214
2028	24,954
2029	25,481
2030	25,902
2031	26,772

* amounts in thousands

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 1999, and does not take into account any subsequent changes.

1. Administration

Each of the 107 contributory retirement systems for public employees for the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts general laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporaries, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

- (i) Group 1: Most general employees in State and local government
- (ii) Group 2: Certain specified hazardous duty positions
- (iii) Group 3: State police officers and inspectors
- (iv) Group 4: Local police officers and firefighters

For members in more than one group, participation will be proportional.

3. **Salary**

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. **Member Contributions**

Member contributions vary depending upon date hired as follows:

<u>Date of Hire</u>	<u>Member Contribution Rate</u>
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later plus	9.0% of Salary
1979 and Later	2.0% of Salary in excess of \$30,000

5. **Average Salary**

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.)

6. **Creditable Service**

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. **Service Retirement**

a. **Eligibility:**

For an employee to be eligible for service retirement (also referred to as superannuation), the following conditions are to be met:

- (i) completion of 20 years of service
- (ii) for an employee prior to January 1, 1978, attainment of age 55 as an active member
- (iii) for an employee on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service
- (iv) if an employee is a State police officer (Group 3), attainment of age 50

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table:

<u>Age at Retirement</u>	<u>Percentage of Average Salary</u>		
	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

For Group 3 (State police), the benefit is 50% of the participant's final year's rate of regular salary, plus an additional 1% for each year of service in excess of 20 years.

In addition, for veterans (all groups) there is an additional benefit of \$15 per year for each

year of service, up to a maximum of 20 years of service.

8. Deferred Vested Retirement

a. Eligibility:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after 6 years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus \$450 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. Ordinary Disability**a. Eligibility:**

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55).

b. Benefit Amount:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55. If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55, he will receive not less than the superannuation allowance to which he is entitled.

11. Survivor Benefits**a. Occupational Death:**

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of \$250 per month to the surviving spouse, plus \$120 for the first child, plus \$90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of \$250 per month plus \$120 for the first child and \$90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

In accordance with the adoption of Chapter 17 of the Acts of 1997 the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum pension benefit on which a COLA may be granted is \$12,000. All COLA's granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

- (i) Option A – Life annuity
- (ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member
- (iii) Option C – Life annuity with 66–2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. **Member Data**

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. **Valuation Date**

January 1, 1999.

3. **Actuarial Cost Method**

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. **Rate of Investment Return**

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.5% per annum.

5. **Salary Scale**

It is assumed that salaries including longevity will increase at a rate of 5.5% per year.

6. **Cost-of-Living Increases**

Cost-of-living increases have been assumed to be 3.0% of the lessor of the pension amount and \$12,000 per year.

7. \$30,000 Pay Cap

The \$30,000 salary cap no longer applies for purposes of benefit determination.

8. Value of Investments

Assets held by the fund are valued at market value as reported by the Public Employees' Retirement Administration Commission (PERAC).

9. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

<u>Age</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>
20	0.1200	0.0210
30	0.0555	0.0165
40	0.0231	0.0056
50	0.0146	0.0000

10 Annual Rate of Mortality

It is assumed that both preretirement and postretirement mortality are represented by the 1983 Group Annuity Mortality Table (with margin) for males and females. Mortality for disabled members is represented by the 1983 Annuity Mortality Table set forward ten years for all disabled members.

11. Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages:

<u>Age</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>
50	0.00	0.10
51	0.00	0.02
52	0.00	0.02
53	0.00	0.02
54	0.00	0.02
55	0.10	0.25
56	0.03	0.05
57	0.03	0.05
58	0.03	0.05
59	0.05	0.05
60	0.05	0.25
61	0.05	0.05
62	0.10	0.05
63	0.10	0.05
64	0.10	0.05
65	1.00	1.00
66	1.00	1.00
67	1.00	1.00
68	1.00	1.00
69	1.00	1.00
70	1.00	1.00

12. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

<u>Attained Age</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>
20	0.00015	0.00050
30	0.00028	0.00114
40	0.00055	0.00434
50	0.00153	0.00750

In addition, it is assumed for the general employees that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

13. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

14. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2001 is \$250,000 and is anticipated to increase at 4.5% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. **Actuarial Accrued Liability**

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. **Actuarial Assumptions**

Assumptions as to the occurrence of future events affecting the Retirement System such as:

Rates of investment returns

Increases in a member's salary

Inflation

The probability of mortality, turnover, disablement

Retirement at each age and other relevant items

3. **Actuarial Cost Method**

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. **Actuarial Present Value**

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. **Forecast**

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the City of Salem Contributory Retirement System contributing as of January 1, 2001, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost is reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

PricewaterhouseCoopers LLP

Daniel W. Sherman, ASA, MAAA
Enrolled Actuary No. 99-4086

June, 2001